The Modeling Analysis and Prediction Initiative for Air Quality (MAP-AQ)

Guy Brasseur[1,2], Rajesh Kumar[2] and Idir Bouarar[1]

1) Max Planck Institute for Meteorology, Hamburg, Germany
2) National Center for Atmospheric Research, Boulder, CO, USA

The overarching goal of MAP-AQ is to constitute and develop a consortium of expert groups to coordinate and enhance research and services that will help mitigate air pollution, specifically in regions of the world where high concentrations of pollutants are observed. We propose to develop and implement a global air pollution monitoring, analysis and prediction system (MAP-AQ) with downscaling capability in regions of the world that are affected by high levels of atmospheric pollutants, in particular in low and middle-income countries. We will combine an ensemble of state-of-the-art multi-scale chemical transport models, high-resolution emission inventories, space observations and surface measurements to provide near-real-time forecasts and analyses of air pollution and its effect at the global to regional and local scales. We will support the development of simple devices for air quality monitoring. We will co-design and co-develop with users and other stakeholders relevant products and services, and transfer air quality related information to the public. We will create collaborative efforts for the application of the system to urban planning. Educational activities will provide the basis for sustained capacity building. An important focus of the project will be the development of a market for the products and services offered by MAP-AQ in different regions.